

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions and listings of claims in the application:

LISTING OF CLAIMS:

Claims 1-13 (canceled).

14. (currently amended): A humidity sensor for measuring the humidity of an atmosphere to which the humidity sensor is exposed comprising:

an insulating substrate; and

a lower electrode, a moisture sensitive layer and an upper electrode successively formed on the insulating substrate, said moisture sensitive layer having an electrical resistance which changes with a change in humidity and said humidity sensor providing a measurement of humidity based on the electrical resistance of said moisture sensitive layer,

wherein the lower electrode comprises a noble metal porous body, the upper electrode comprises a noble metal porous body, the moisture sensitive layer is porous, and the upper electrode is joined to the moisture sensitive layer and a portion of the insulating substrate, and

wherein a size of pores in the upper electrode is 0.5-20 μm , a size of pores in the lower electrode is 0.5-20 μm , a size of pores in the moisture sensitive layer is 0.05-0.2 μm , particles of ceramic are incorporated in an amount of 1-20 wt% into the upper electrode, particles of ceramic are incorporated in an amount of 1-20 wt% into the lower electrode, and one or both of the lower electrode and the upper electrode predominantly contains Pt.

15. (previously presented): The humidity sensor as claimed in claim 14, further comprising a heater provided in the insulating substrate.

16. (previously presented): The humidity sensor as claimed in claim 15, comprising a temperature measurement resistor provided in the insulating substrate.

17. (previously presented): The humidity sensor as claimed in claim 15, wherein the heater is located directly below the moisture sensitive layer.

18. (previously presented): The humidity sensor as claimed in claim 16, wherein the temperature measurement resistor is located directly below the moisture sensitive layer.

19. (previously presented): The humidity sensor as claimed in claim 14, adapted for measuring humidity in an atmosphere containing a very small amount of oxygen and containing a reducing gas.

20. (previously presented): The humidity sensor as claimed in claim 14, wherein one or both of the lower electrode and the upper electrode predominantly contains Pt and further contains Rh.

21. (previously presented): The humidity sensor as claimed in claim 14, wherein each of the lower electrode and the upper electrode predominantly contains Pt and further contains Rh.